REMARKS/ARGUMENTS

Claims 1-11 are pending herein. Claims 1 and 5 have been amended to correct minor matters of form, and to recite that the ceramic electrostatic chuck member has an electrode in direct contact therewith. Applicants respectfully submit that support for rewritten claims 1 and 5 can be found in Figs. 1-3(c) and paragraphs [0021] and [0023]-[0025] of the specification, for example. Claims 2-4 have been rewritten to correct minor matters of form and for clarification purposes only. New claims 6-11 have been added hereby as supported by Figs. 1 and 3(a)-3(c) and paragraphs [0023]-[0025] of the specification, for example. Applicants respectfully submit that no new matter has been added.

1. Claim 1 was rejected under §103(a) over Matsunaga in view of Tomaru. Applicants respectfully traverse this rejection. To the extent that this rejection might also be applied against new claim 8, it is respectfully traversed, as well.

Independent claim 1 recites an electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member having an electrode in direct contact therewith, a metal member, and a bonding layer. The ceramic electrostatic chuck member and the metal member are bonded with the bonding layer. The bonding layer comprises at least a first outermost bonding layer bonded to the ceramic electrostatic chuck member, a second outermost bonding layer bonded to the metal member, and a polyimide layer disposed between the first and second outermost bonding layers. Each of the first and second outermost bonding layers comprises a silicone layer.

In the Office Action, the PTO admitted that Matsunaga's outermost bonding layers (20 and 14 shown in Matsunaga's Fig. 1) are not silicone bonding layers. In an attempt to overcome the admitted deficiency of Matsunaga, the PTO applied Tomaru and asserted that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Matsunaga solution by adding the bonding silicone layers because of the silicon [sic., silicone] advantages, such as, according to Tomaru et al. (col. 1, lines 63-67), the excellent thermal conductivity and heat

dissipation and ability to withstand high temperatures" (Office Action, page 3, lines 5-9). Applicants respectfully disagree with the PTO.

As mentioned above, independent claim 1 now recites that the ceramic electrostatic chuck member has an electrode in direct contact therewith. Applicants respectfully submit, however, that there is no disclosure or suggestion in Matsunaga of providing a ceramic electrostatic chuck member having an electrode in direct contact therewith. For example, in Matsunaga's Figs. 1 and 6, for example, the electrodes 18 are formed on an insulating film layer 16 and then the ceramic layer is laminated onto the electrode layer via an adhesive 20. See also Matsunaga, Col. 7, lines 45-47, Col. 8, lines 8-14, Col. 9, lines 34- 37, and lines 51-54.

Further, although Tomaru's Fig. 2 shows an electrostatic chuck having a conductive electrode pattern 14 directly formed on the first insulating layer 12, which is a ceramic material (see Tomaru, Col. 3, lines 15-17 and 33), Applicants respectfully submit that Tomaru teaches that the electrostatic chuck includes "a metallic plate 10, on which a first insulating layer 12, a conductive pattern 14 and a second insulating layer 16 are formed in this order" (Tomaru, Col. 3, lines 2-5). Tomaru also specifically teaches that it is preferred to bond "the first insulating layer 12 and the conductive pattern 14 through an adhesive or primer layer 20" (Tomaru, Col. 3, lines 8-12).

Matsunaga, on the other hand, teaches that the electrostatic chuck is formed "such that a disc-shaped metal substrate 12, electricity insulating elastic layer 14, insulating film layer 16, adhesive layer 20 and ceramic layer 22 are laminated sequentially starting from the bottom, with electrodes 18, 18 formed to a specific site on insulating film layer 16" (Matsunaga, Col. 4, lines 1-6). Matsunaga further teaches that the electrostatic chuck is formed by a method whose steps, in order, include forming an electrode layer on one surface of the insulating film and laminating a ceramic layer onto the electrode layer via an adhesive (see Matsunaga, Col. 7, lines 44-47).

In view of the conflicting structural arrangements of Matsunaga and Tomaru, Applicants respectfully submit that one of ordinary skill in the art would not have been

motivated to completely rearrange Matsunaga's structure such that the electrode 18 directly contacts an internal ceramic layer 22, even in view of Tomaru, especially since in Matsunaga, the electrode 18 is sandwiched between adhesive layers within the layered chuck structure wherein the ceramic layer 22 is the uppermost layer.

In view of the above, Applicants respectfully submit that even if one of ordinary skill in the art had combined the references as the PTO suggested, such a skilled artisan still could not possibly have arrived at the present invention in view of Matsunaga and Tomaru without otherwise relying on the benefit of Applicants' disclosure. For at least the foregoing reasons, Applicants respectfully submit that independent claim 1, and all claims pending therefrom, define patentable subject matter over Matsunaga and Tomaru.

Independent claim 8 recites a ceramic electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member, a metal member, and a bonding layer bonding the ceramic electrostatic chuck member. The bonding layer comprises *only* a first outermost silicone bonding layer bonded to the ceramic electrostatic chuck member, a second outermost silicone bonding layer bonded to the metal member, and a polyimide layer disposed between the first and second outermost silicone bonding layers.

Applicants respectfully submit, however, that the applied references do not disclose or suggest a bonding structure sandwiched between a ceramic member and a metal member that comprises three layers, and only three layers, that are specifically silicone, polyimide and silicone, layered in that order. Furthermore, even if one of ordinary skill in the art had modified Matsunaga's chuck structure to instead include Tomaru's bonding layers as the PTO suggested, the resultant bonding layer still would necessarily have included an electrode 18 between Matsunaga's metal member 12 and ceramic layer 22, which is clearly not a bonding layer comprising *only* a first outermost silicone bonding layer, a second outermost bonding layer and a polyimide layer disposed between the first and second outermost silicone bonding layers, as recited in claim 8.

For at least the foregoing reasons, Applicants respectfully submit that independent claims 1 and 8, and all claims depending therefrom, define patentable subject matter over the applied references. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

2. Claims 2 and 4 were rejected under §103(a) over Matsunaga in view of Tomaru and in further view of *In Re Aller*. Applicants respectfully traverse this rejection.

Claims 2 and 4 each depend from independent claim 1, which is discussed above in section 1. Applicants respectfully submit, however, that since independent claim 1 defines patentable subject matter over the applied references for the reasons explained above, dependent claims 2 and 4 likewise define patentable subject matter over the applied references by virtue of their dependency from independent claim 1.

For at least the foregoing reasons, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

3. Claim 1 was rejected under §103(a) over Matsunaga in view of Tomaru and further in view of Parkhe. Applicants respectfully traverse this rejection.

Claim 3 depends from independent claim 1, which is discussed above in section 1. Applicants respectfully submit, however, that since claim 1 defines patentable subject matter over the applied references for the reasons explained above, claim 3 likewise defines patentable subject matter over the applied references by virtue of its dependency from independent claim 1.

For at least the foregoing reasons, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

4. Claim 4 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of McMillin. Applicants respectfully traverse this rejection.

Claim 4 defines patentable subject matter over the applied references by virtue of its dependency from independent claim 1. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

5. Claim 5 was rejected under §103(a) over Matsunaga in view of Tomaru and in further view of Weldon. Applicants respectfully traverse this rejection. To the extent that this rejection might be applied against new claim 10, it is respectfully traversed, as well.

Independent claim 5 recites a method for manufacturing an electrostatic chuck having a bonded structure comprising a ceramic electrostatic chuck member having an electrode in direct contact therewith, a metal member, and a bonding layer bonding the ceramic electrostatic chuck member and the metal member. The bonding layer includes at least a first outermost silicone bonding layer bonded to the ceramic electrostatic chuck member, a second outermost silicone bonding layer bonded to the metal member, and a polyimide layer disposed between the first and second outermost silicone bonding layers.

Applicants respectfully submit that there is no disclosure or suggestion in the applied references of an electrostatic chuck having the structure recited in claim 5, as explained above in section 1 with respect to independent claim 1. Absent any such disclosure or suggestion of the claimed structure in the applied references, Applicants respectfully submit that one of ordinary skill in the art could not possibly have arrived at the method recited in claim 5 to manufacture such an undisclosed structure. That is, since none of the applied references disclose or suggest the structure recited in claim 5, Applicants respectfully submit that even if the applied references were combined as suggested by the PTO, the combined method steps would have produced a structure that still lacked a ceramic electrostatic chuck member having an electrode in direct contact therewith.

For at least the foregoing reasons, Applicants respectfully submit that independent method claim 5, and all claims depending therefrom, define patentable subject matter over the applied references.

Independent method claim 10 recites a method for manufacturing an electrostatic chuck having a bonded structure including a ceramic electrostatic chuck member, a metal member, and a bonding layer bonding the ceramic electrostatic chuck

member and the metal member. The bonding layer comprises *only* a first outermost silicone bonding layer bonded to the ceramic electrostatic chuck member, a second outermost silicone bonding layer bonded to the metal member, and a polyimide layer disposed between the first and second outermost silicone bonding layers.

Applicants respectfully submit that there is no disclosure or suggestion in the applied references of the structure recited in independent claim 10, as explained above in section 1 with respect to new independent claim 8. Absent any disclosure or suggestion of the claimed structure in the applied references, Applicants respectfully submit that even if one of ordinary skill in the art had combined the applied references as suggested by the PTO, the combined method steps would have produced a structure that still would have lacked a three-layered bonding layer comprising *only* silicone, polyimide and silicone, layered in that order.

For at least the foregoing reasons, Applicants respectfully submit that independent method claims 5 and 10, and all claims depending therefrom, define patentable subject matter over the applied references. Accordingly, Applicants respectfully request that the above rejection be reconsidered and withdrawn.

If the Examiner believes that contact with Applicants' attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicants' attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

October 7, 2004
Date

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